

AMENDMENTS TO THE CLAIMS

1. – 3. (Canceled)
4. (Withdrawn) The method of claim 1, wherein the at least one additional source includes a percent time in mode switch source.
5. (Withdrawn) The method of claim 1, wherein the at least one additional source includes an R-wave and P-wave amplitude source.
6. (Withdrawn) The method of claim 1, wherein the at least one additional source includes a reversion pace count source.
7. (Withdrawn) The method of claim 1, wherein the at least one additional source includes a refractory sense count source.
8. (Withdrawn) The method of claim 1, wherein the at least one additional source includes a high rate episode count source.
9. (Withdrawn) The method of claim 1, wherein the at least one additional source includes a time from implant source.
10. (Canceled)
11. (Withdrawn) The method of claim 2, wherein the message indicates a lead conductor or connector issue.
12. (Withdrawn) The method of claim 2, wherein the message indicates a lead insulation issue.
13. – 14. (Canceled)
15. (Withdrawn) The method of claim 13, wherein the biological interface issue includes lead dislodgement.

16. (Withdrawn) The method of claim 13, wherein the biological interface issue includes exit block.
17. (Currently Amended) A method of lead status monitoring in an implantable medical device (IMD) comprising the steps of:

~~collecting lead impedance data,~~

~~collecting stimulation threshold data,~~

sensing signals along two distinct sensing pathways;

collecting data relating to one of a percent of time in mode switch, R-wave amplitude, P-wave amplitude, reversion pace count, refractory sense count, high rate episode count, and time from implant; and

processing the collected data in accordance with an algorithm having an integrated set of rules to determine if a lead status event has occurred, wherein each rule of the set applies a specific determination criterion to a particular aspect of the collected data, and wherein a first determination criterion is applied for signals sensed along a first sensing pathway of the two distinct sensing pathways, and a second determination criterion is applied for signals sensed along a second sensing pathway of the two distinct sensing pathways.
18. (Previously Presented) The method of claim 17, further comprising

providing a message indicating a lead-related condition to a user based on the lead status event.
19. (Previously Presented) The method of claim 18, wherein the message indicates one of a lead conductor or connector issue, a lead insulation issue, and a biological interface issue.
20. (Previously Presented) The method of claim 19, wherein the biological interface issue includes one of myocardial perforation, lead dislodgement, and exit block.

21. (Previously Presented) The method of claim 17, wherein the processing comprises: assigning weighted values to the collected data sets; and

summing the assigned weighted values to determine if one of a plurality of lead status events has occurred.
22. (New) A method of distinguishing lead-related conditions in a medical device, comprising:

sensing signals received by a plurality of electrodes positioned along one or more leads;

determining whether a number of sensed events occurring along a first sensing pathway formed by one or more of the plurality of electrodes is greater than a first threshold associated with the first sensing pathway to generate a first event count;

determining whether a number of sensed events occurring along a second sensing pathway formed by one or more of the plurality of electrodes, different from the first sensing pathway, is greater than a second threshold associated with the second sensing pathway to generate a second event count; and

identifying the presence of a lead-related condition in response to the first event count and the second event count.
23. (New) The method of claim 22, wherein the first sensing pathway corresponds to a unipolar sensing pathway and the second sensing pathway corresponds to a bipolar sensing pathway.
24. (New) The method of claim 22, further comprising:

determining a number of counter windows; and

determining whether a sum of the first event count and the second event count is greater than a count threshold, wherein the count threshold varies depending on the determined number of counter windows.